

EC³

“**Blurring** the Lines Between
Secondary & Postsecondary Education
In a Net Zero Achievable Facility”

Kenny Stanfield, AIA, LEED AP
Sherman Carter Barnhart Architects



Agenda

- **The Challenge**
- **Defining The Vision**
 - **The Community & Collaborative Partnerships**
- **Building The Vision**
 - **Hardin County EC³**
- **How it Works**
 - **Pathways To Success**
- **Beyond The KDE Program**



The Challenge:

All STUDENTS
must graduate
College and Career
READY

The Challenge:

25

**Annually, Less Than
Students Were
Participating In
Advanced Skill
Training Through
ECTC.**

The Challenge:

Hardin County Was

NOT

Meeting The Challenge



Defining The Vision:

Through
Community
& Collaborative
Partnerships

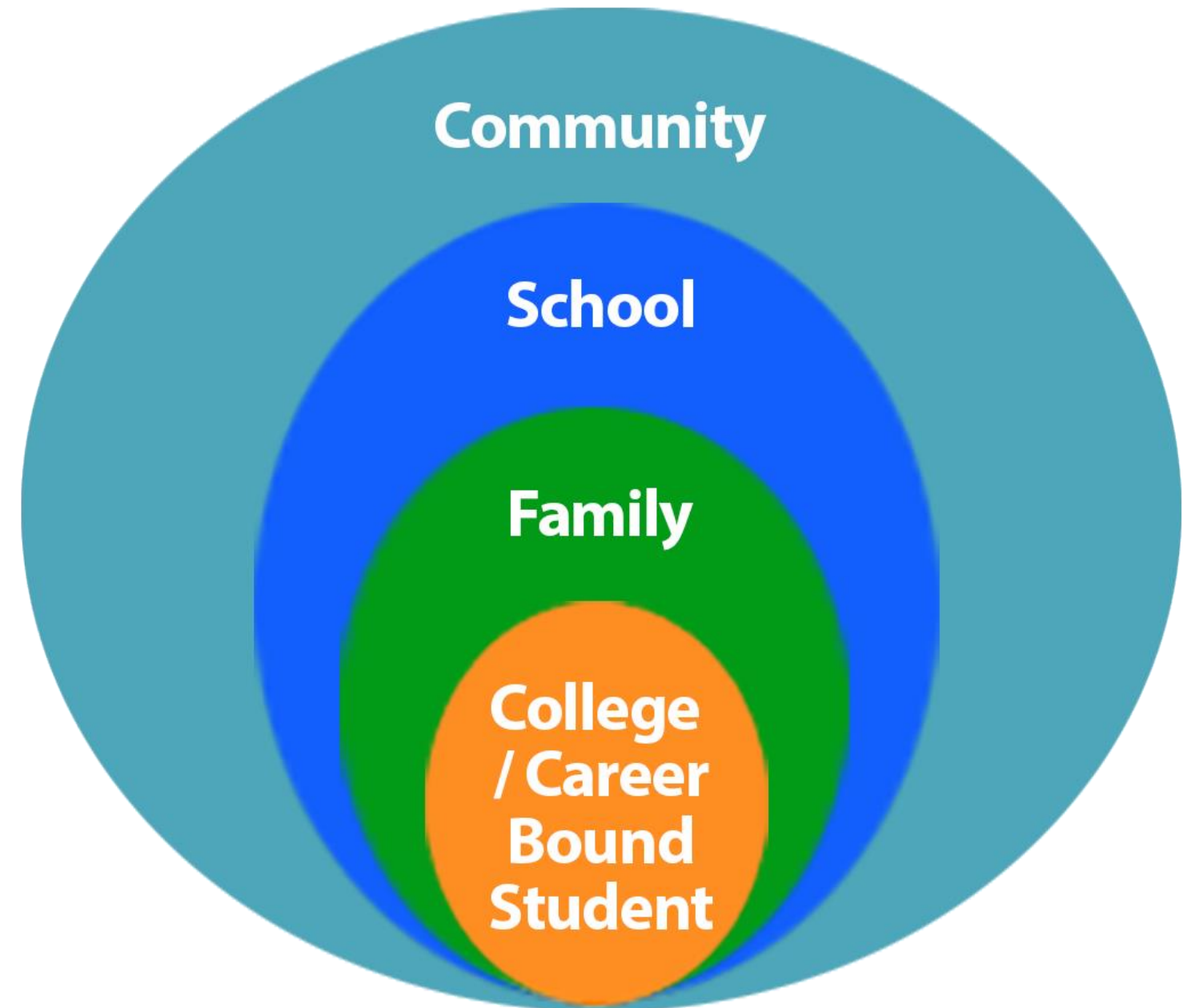
Community: Needs & Input

- **Community Needs:**

- **Employees With A Strong Work Ethic**
- **Employees With Background Knowledge And Related Experience.**

- **Community Input:**

- **Community Field Trips To Explore Options**
- **To Determine Pathways Based On Regional Employment Needs And Student Interest**



Community: The Power of Partnerships

- **Established Multi-Faceted Collaborative Partnerships**
- **Visited Multiple ATCs with SCB to Clarify And Refine The Vision**
- **Included Student And Stakeholder Input In Designing Pathway Space**



Collaborative Partnerships:

Establishing the “What” = Vision

- **Central Kentucky Community Foundation**
 - Land Gift
- **University Partnerships**
 - WKU
 - Sullivan University
 - ECTC
 - Spencerian
- **Business and Industry Advisory Partners**
- **Architect Partners**
- **Student Advisory Council**



DOW CORNING



SHERMAN
CARTER
BARNHART
ARCHITECTS



“This is the most dynamic educational partnership in the Commonwealth.”

- Lt. Governor Jerry Abramson
January 24, 2013



8

pathways
to

SUCCESS

1. Advanced Manufacturing

2. Automotive

3. Culinary Arts

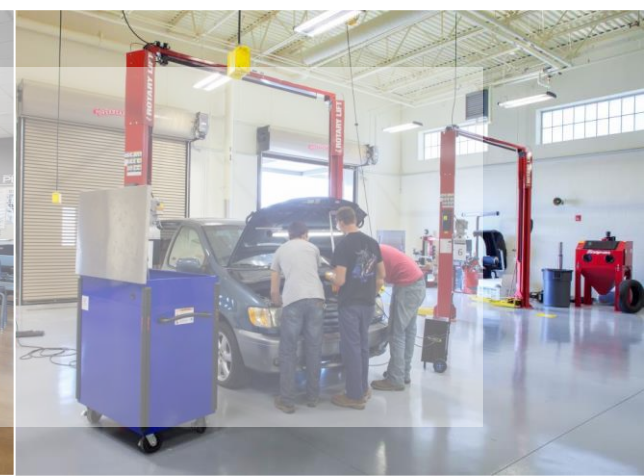
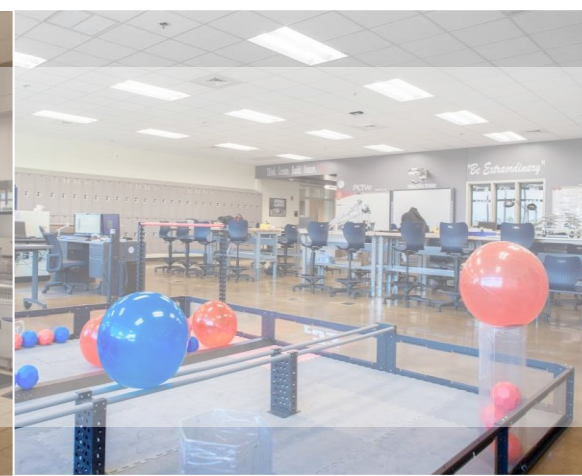
4. Engineering

5. Health Sciences

6. Information Technology

7. Welding

8. Early College



Hardin County EC³

**building the
vision**







Building The Vision: How It Works

lower level



1. Advanced Manufacturing
2. Automotive
3. Culinary Arts
4. Engineering
5. Health Sciences
6. Information Technology
7. Welding
8. Early College



upper level

Building The Vision: **Energy Savings**

- **The Average Annual Cost Of Energy For A Typical 72,000SF School In Kentucky is **\$182,500.00****
- **HCEC³ Is Designed to Operate at a 50% + Energy Use Reduction, To Cut the Energy Bill In **1/2** Over the Course of a Year.**

“Hardin County Schools has focused on energy savings for the past decade. With the new Early College & Career Center, district officials were eager to take the next step & wanted this school to go above and beyond our normal energy efforts. Sherman Carter Barnhart's history with net zero buildings is one of the reasons why the HCS Board hired them for this project.”

- Nannette Johnston,
Superintendent
Hardin County Schools

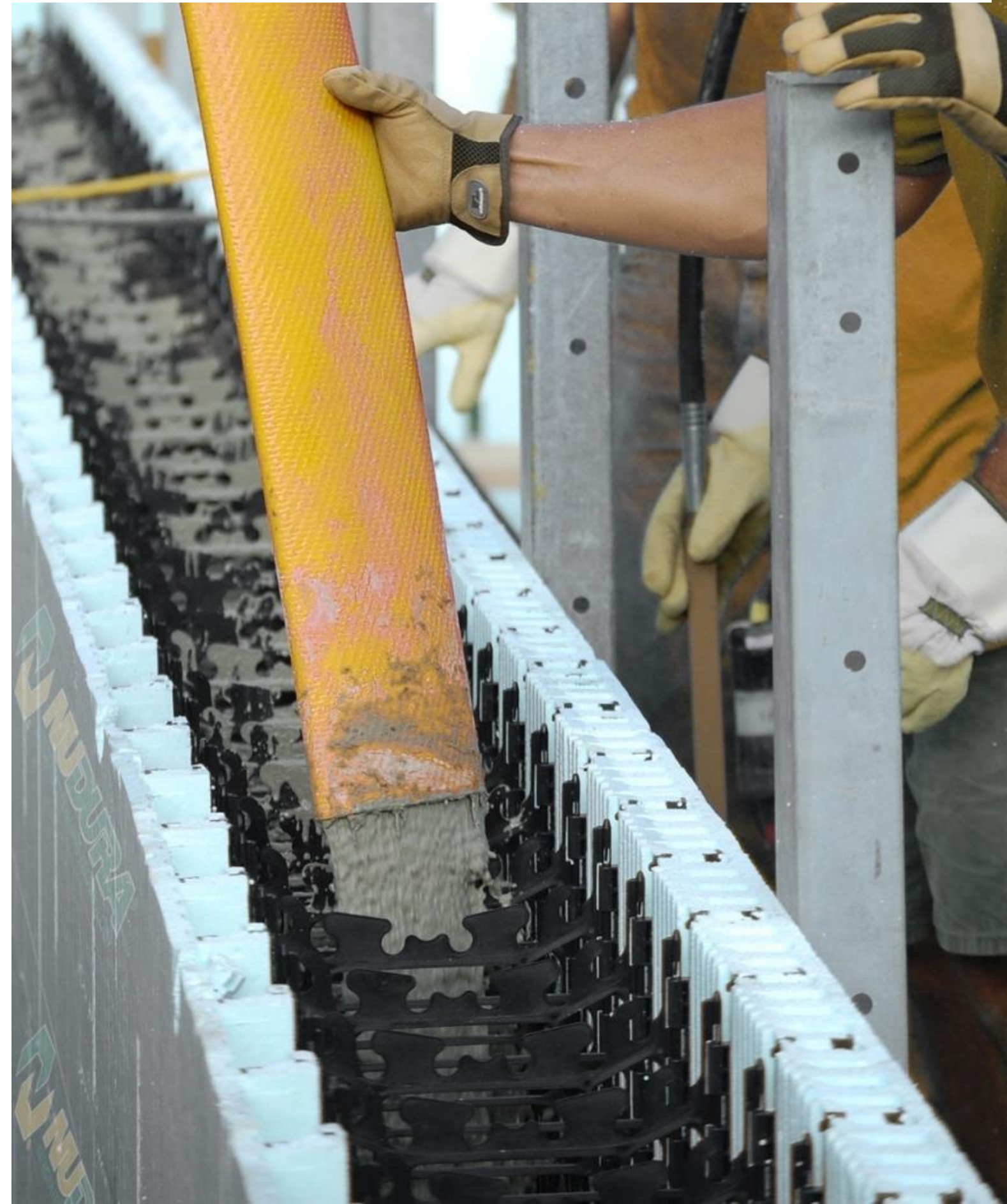
Building The Vision: **Energy Savings**

- **High Performance Building**
 - **Net Zero Achievable**
 - **Compact Building Configuration**
 - **ICF (Insulated Concrete) Walls**
 - **Super Insulated R-32 Roof**
 - **Geothermal HVAC**
 - **LED Lighting Throughout Building**
 - **Occupancy, Motion & CO₂ Monitoring Controls**
 - **Central Clerestory For Daylight Harvesting**
 - **Stained Polished Concrete Floors**



Building The Vision: **Energy Savings**

- **High Performance Building Envelop**
 - **Compact Building Volume Reduces Areas Of Exposed Exterior Surfaces**
 - **Super Insulated Exterior Wall & Roof Systems**
 - **Reduce External Air Infiltration**
 - **Reduce Or Eliminate Large Mechanical Platforms**



Building The Vision: **Energy Savings**

- **Mechanical Systems**
 - **Geothermal**
 - **Demand Control Ventilation**
- **Electrical Systems**
 - **LED Lighting & Dimming Controls**
 - **Daylighting**
 - **Plug & Play Lighting**
 - **Plug Load Controls**



how

it

WORKS

8 Pathways To Success

1. Advanced Manufacturing

2. Automotive

3. Culinary Arts

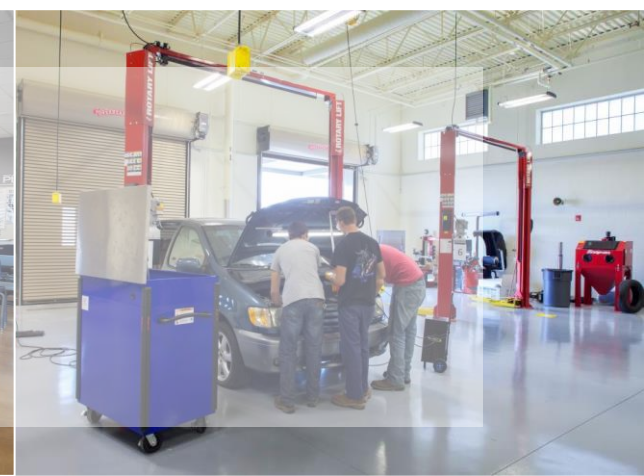
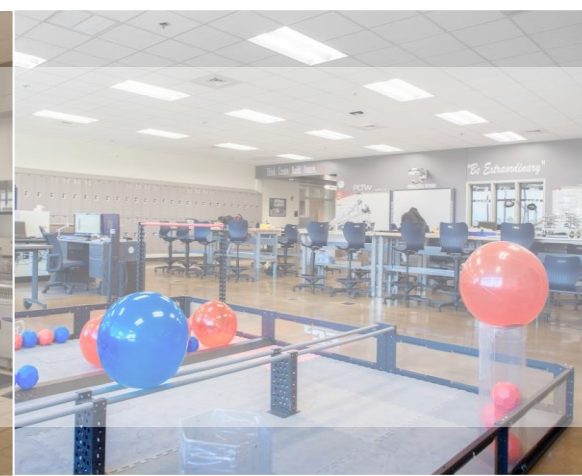
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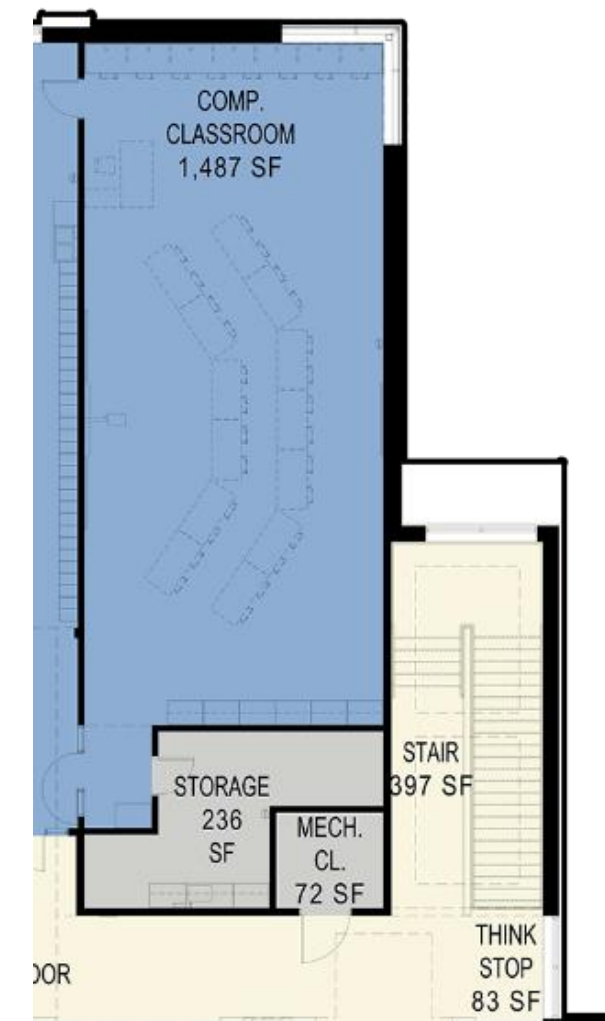
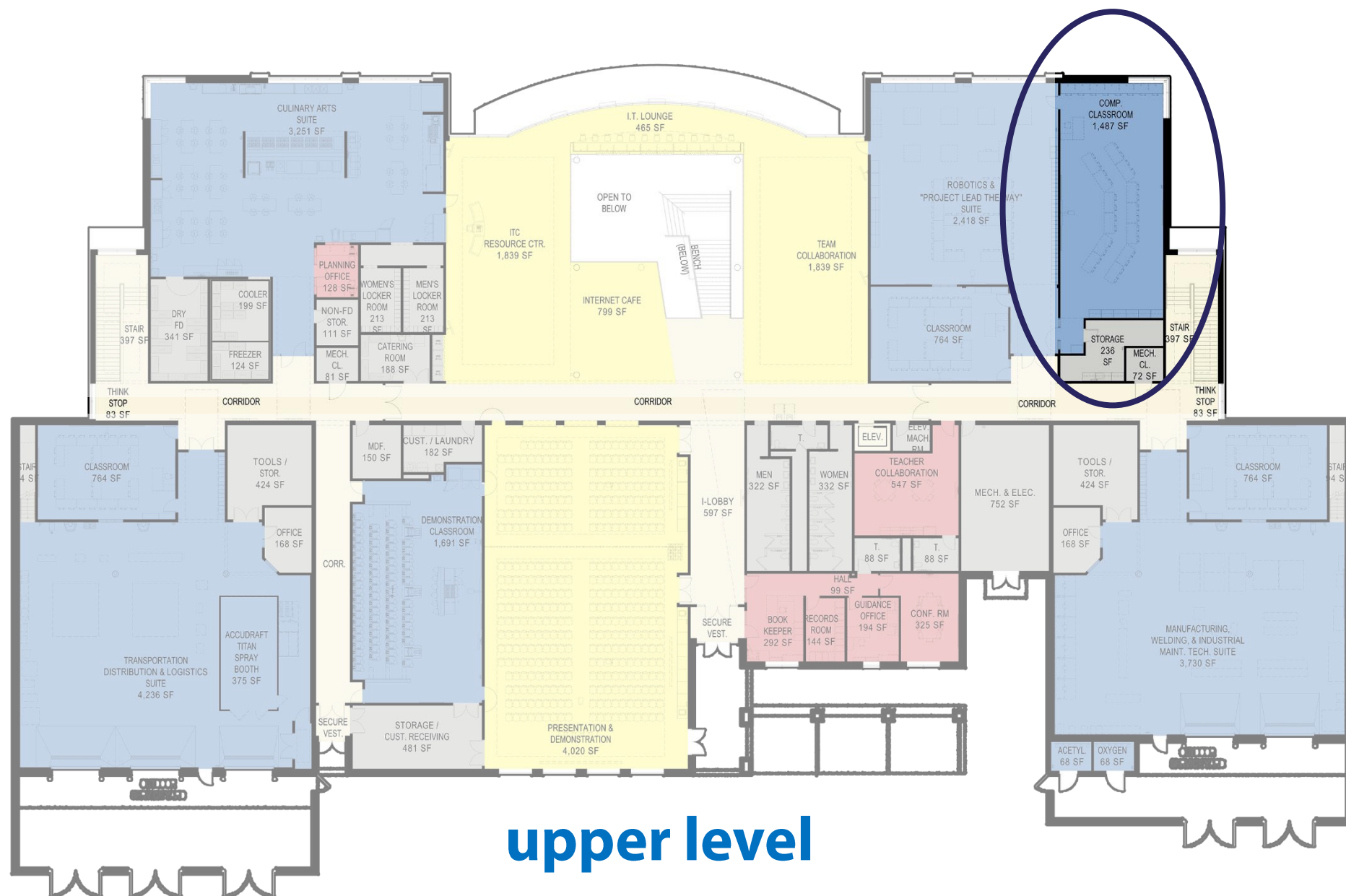
8. Early College



A large industrial workshop with a worker in a green shirt and safety glasses measuring a long metal beam on the floor. The workshop has a high ceiling with exposed pipes and lights. In the background, there are various machines, a red curtain, and a blue storage cabinet. The floor is polished and reflects the overhead lights.

advanced manufacturing

Advanced Manufacturing



Advanced Manufacturing



Advanced Manufacturing

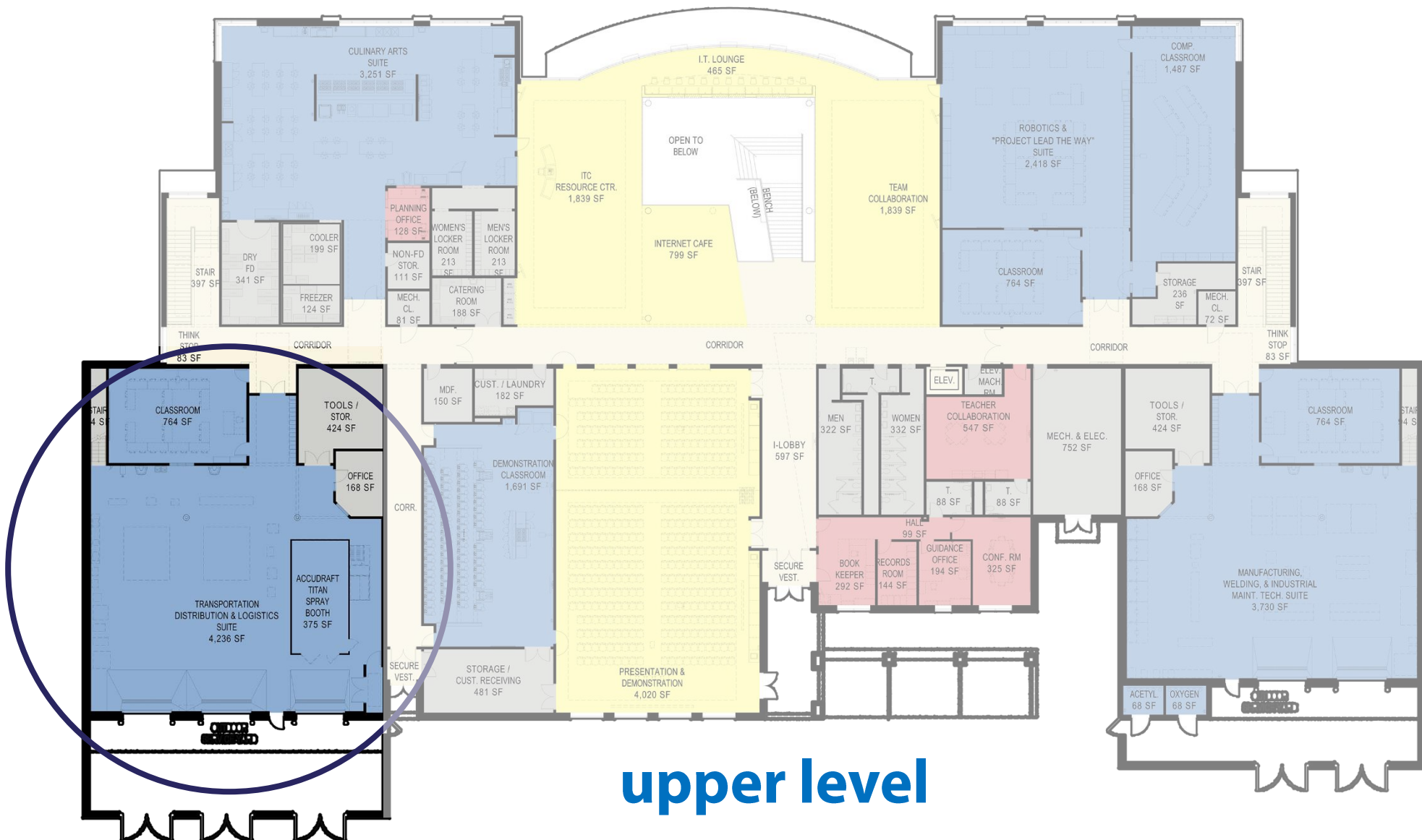
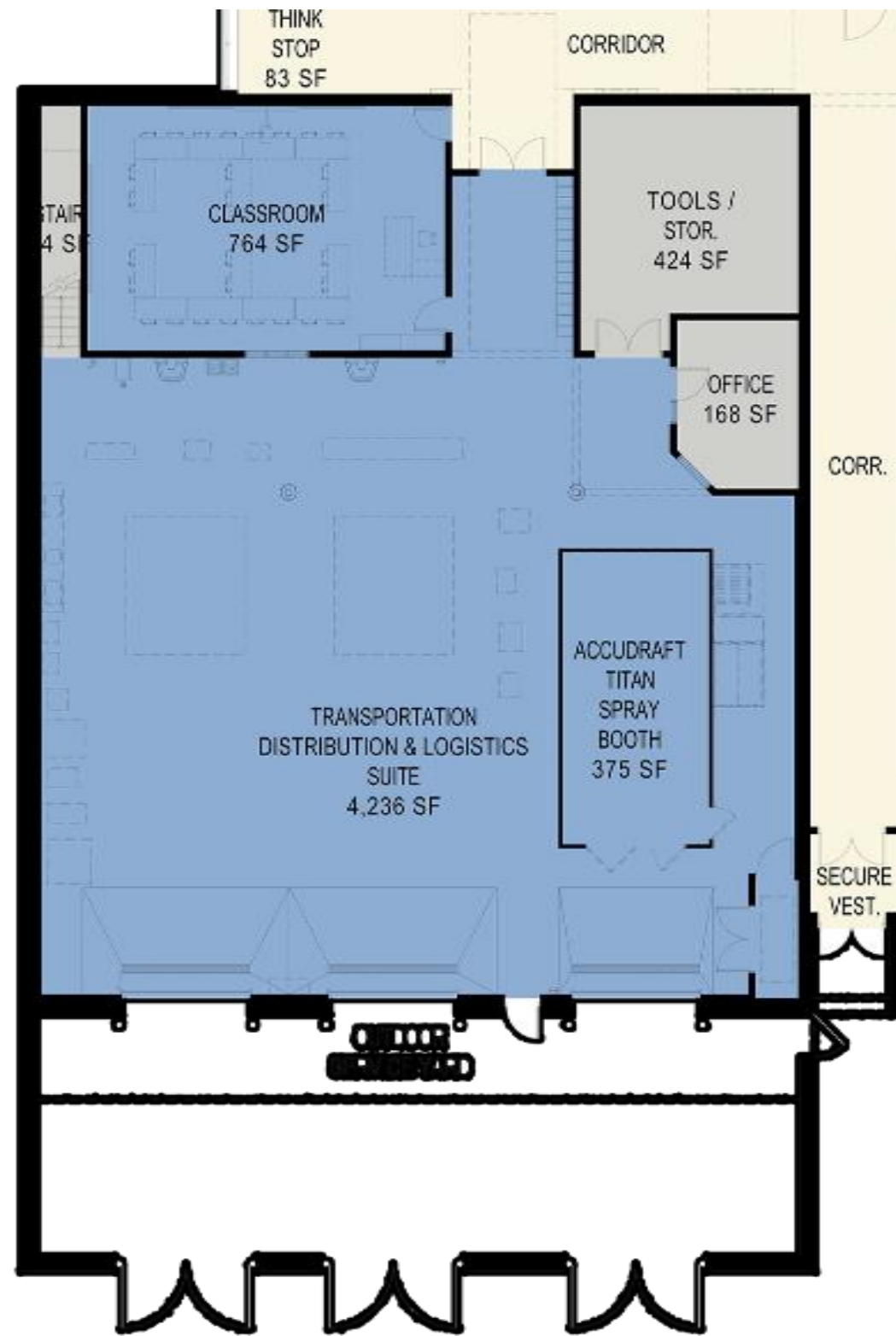


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automotive technology



Automotive Technology



upper level

Automotive Technology



Automotive Technology

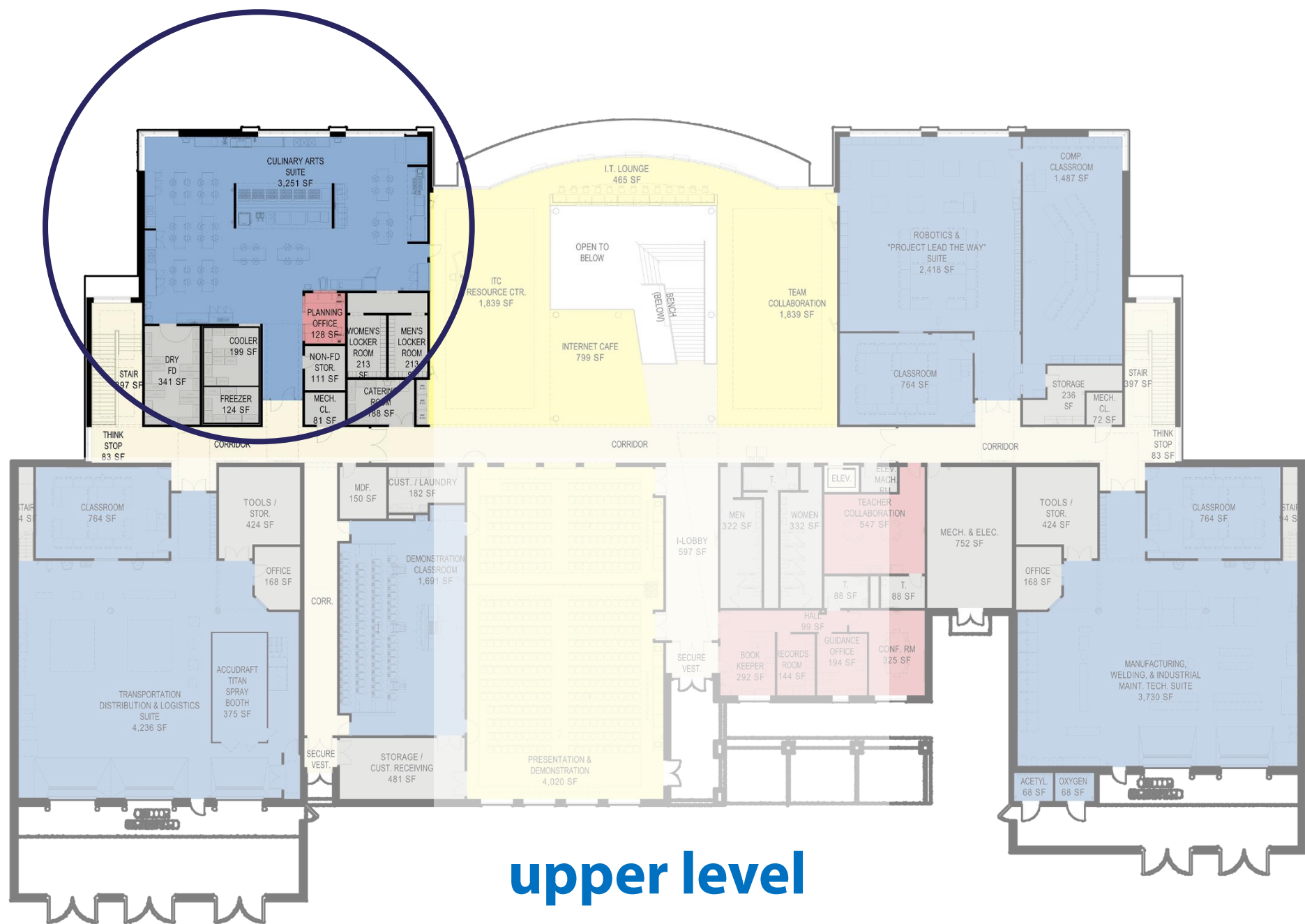




3

culinary
arts

Culinary Arts



Culinary Arts



Culinary Arts



Culinary Arts

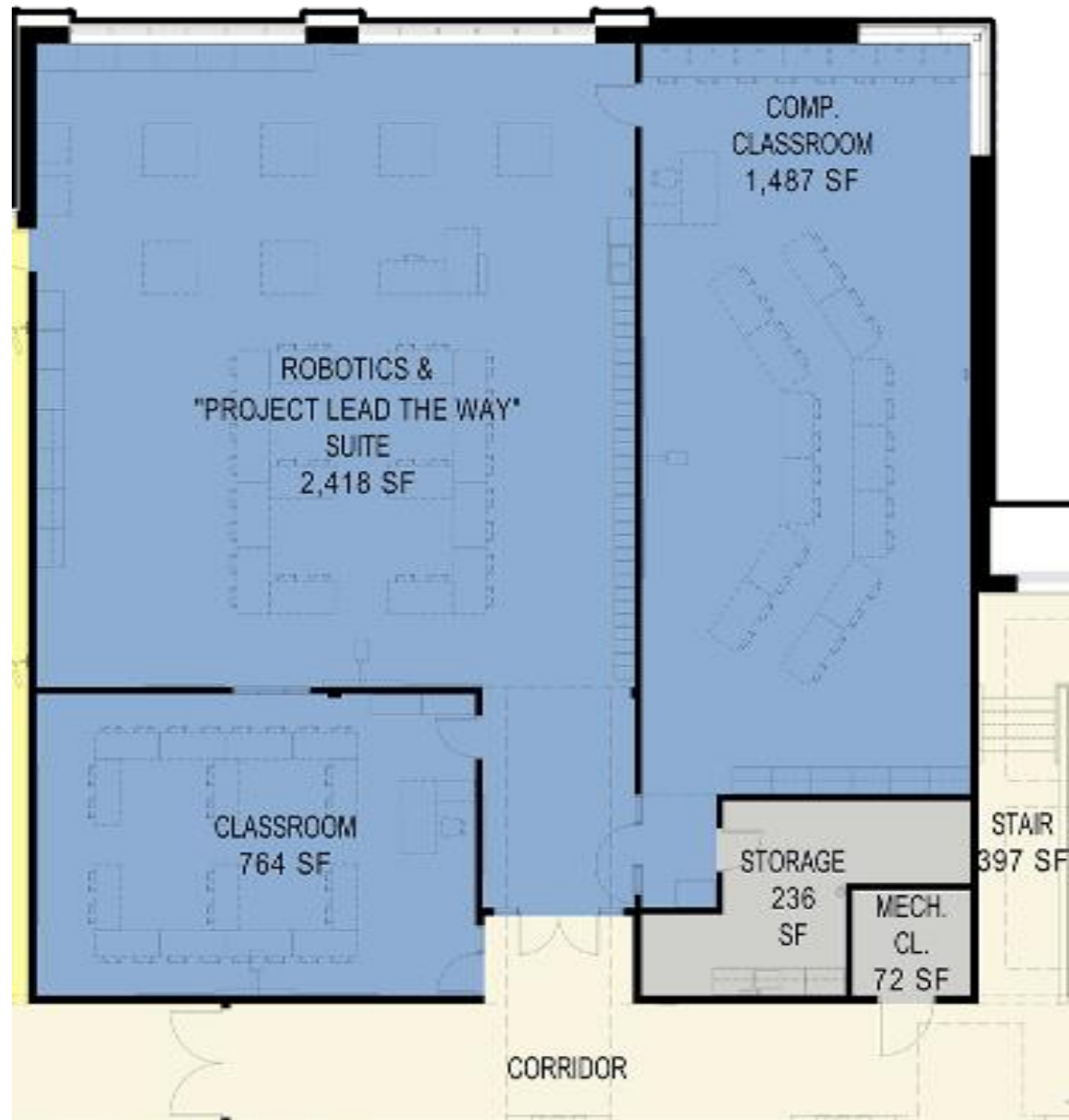


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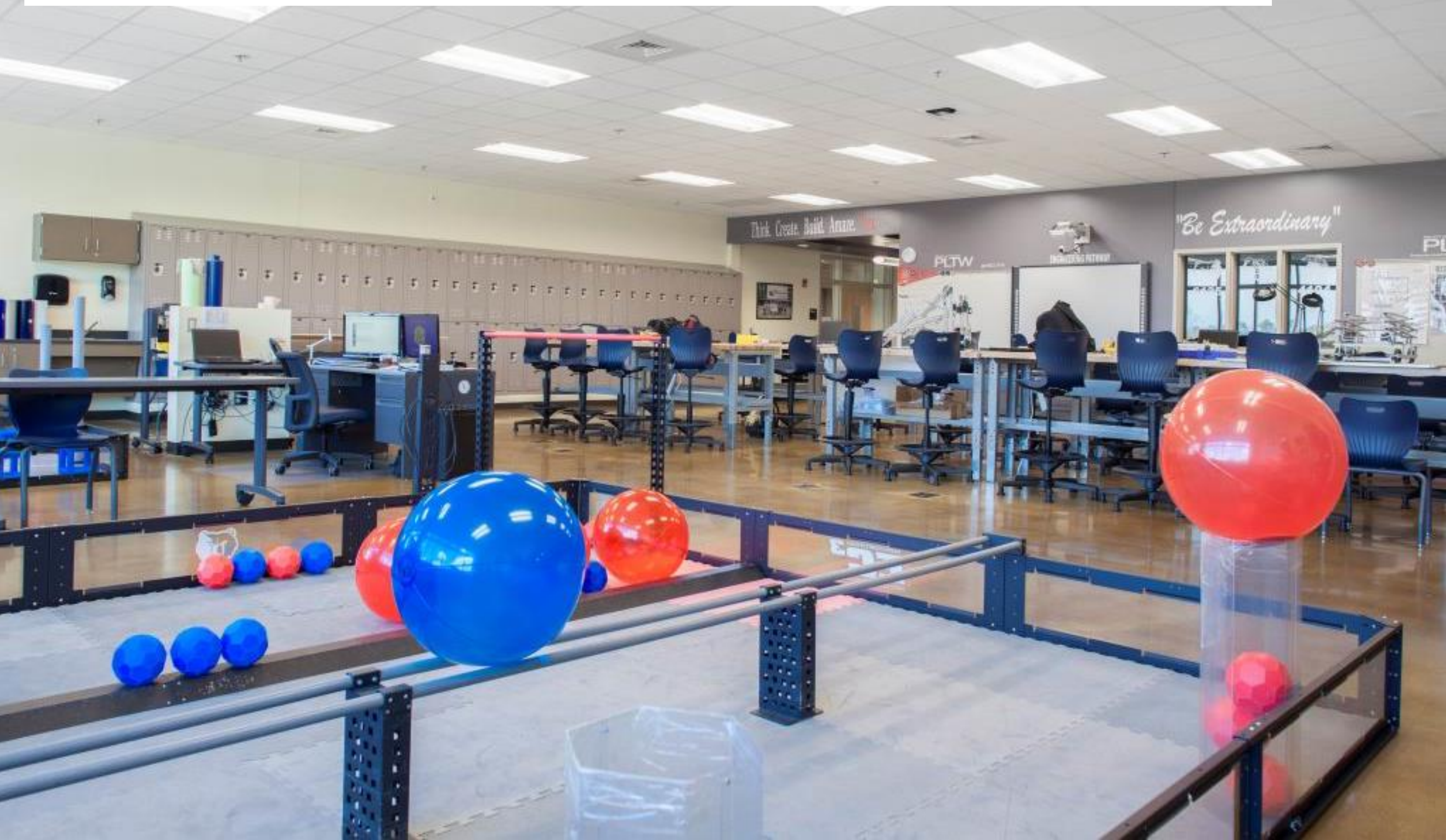
engineering

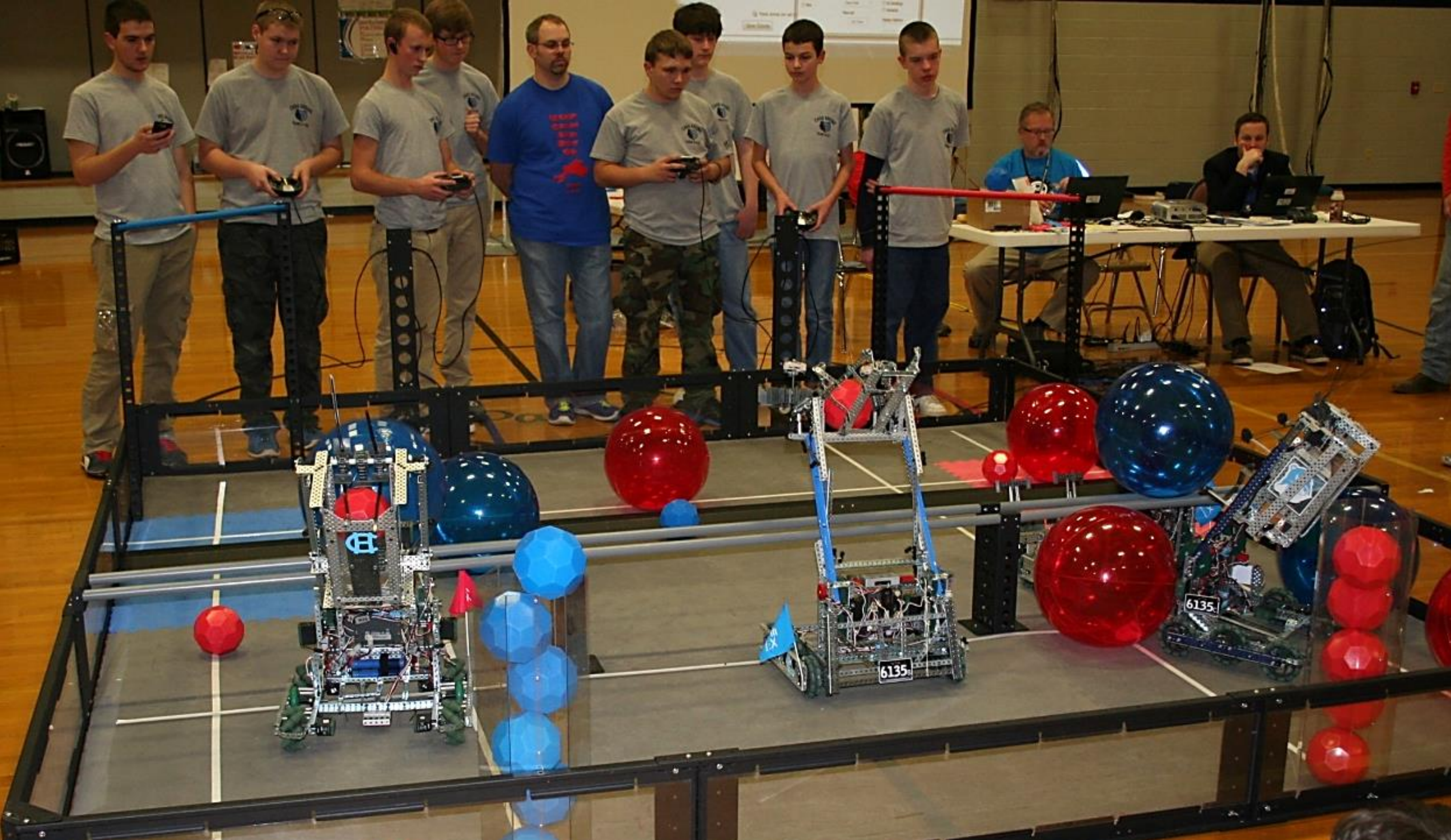


Engineering



Engineering – PLW - Robotics





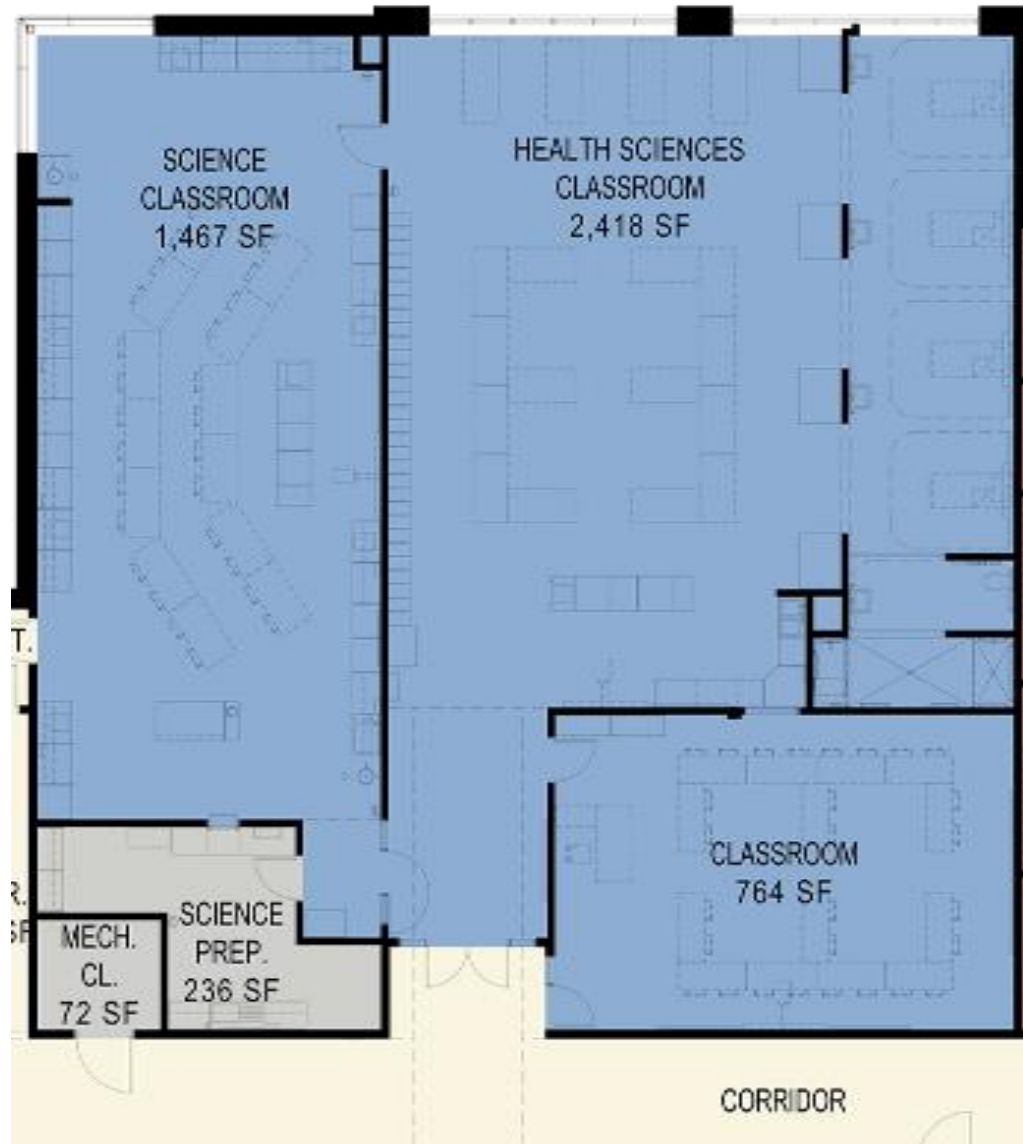
Engineering – PLW - Robotics

5

health
sciences

HARDIN COUNTY SCHOOLS
EC³
EARLY COLLEGE & CAREER CENTER
SPORTS MEDICINE

Health Sciences



Sports Medicine



Sports Medicine



Medicaid Nurse Aid

Passing this course will make students eligible to enroll in Nursing programs across the state.



Phlebotomy



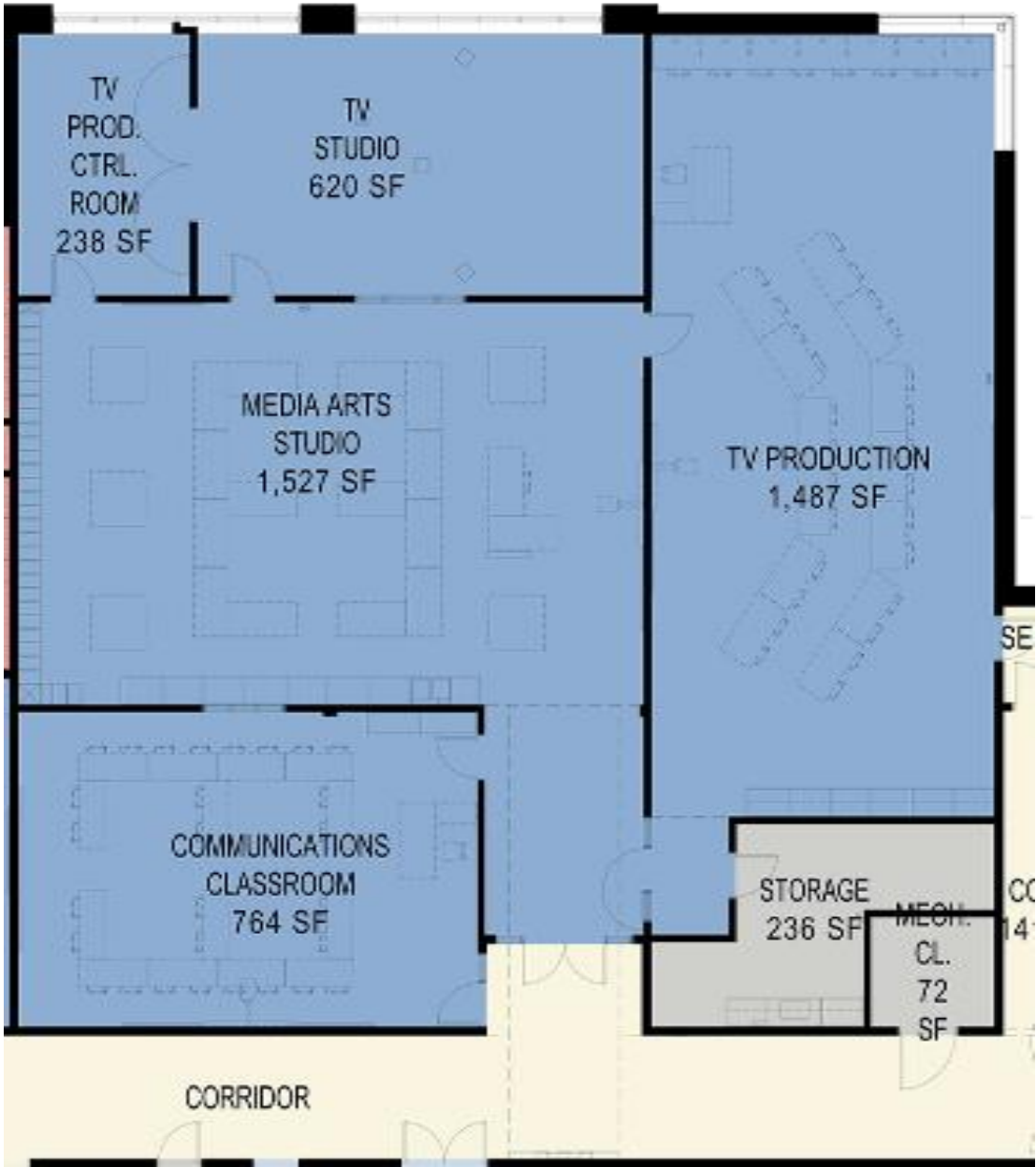
Health Lab - Pharmacy Tech



information technology



Information Technology



Information Technology



EXIT

7

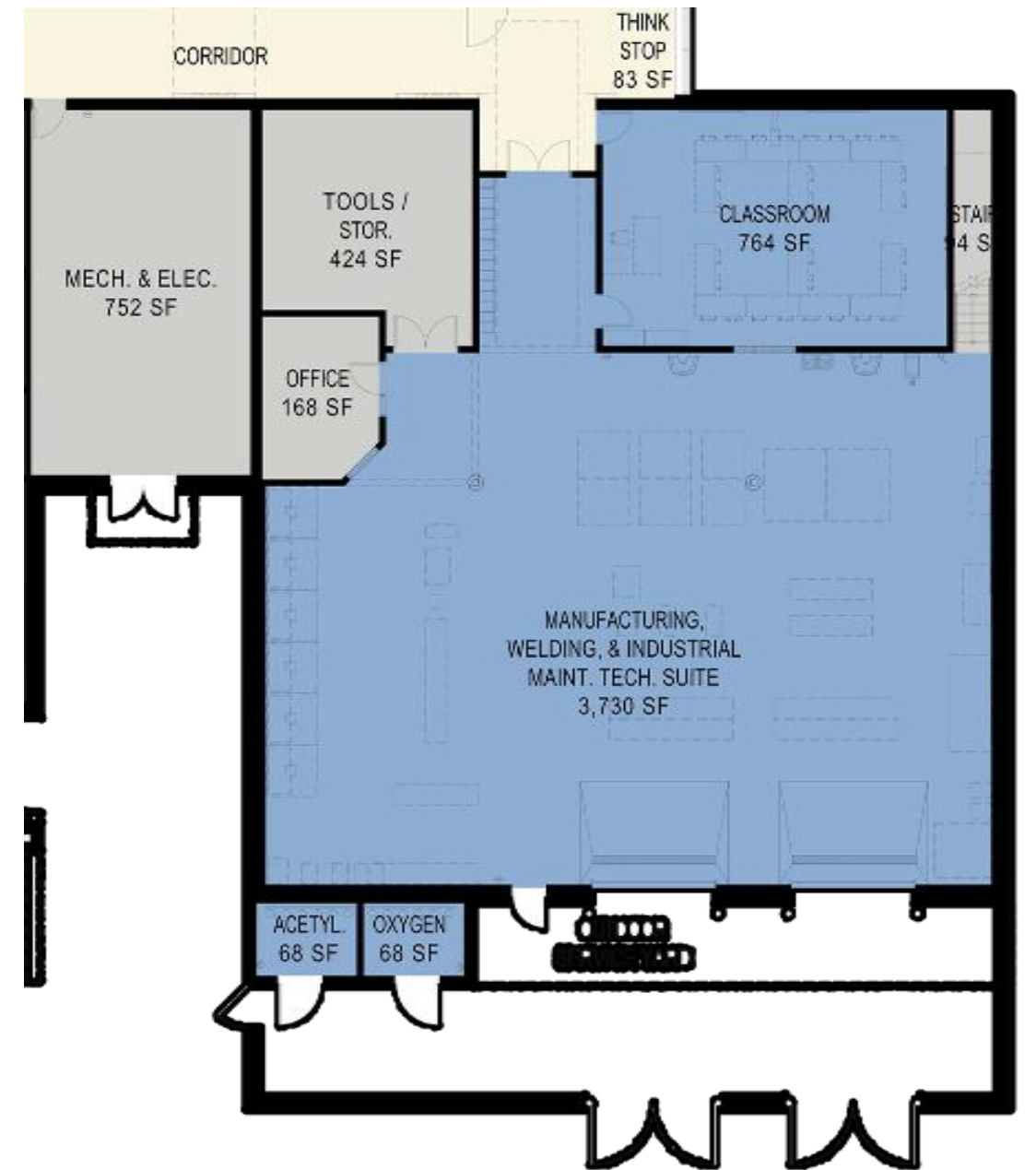
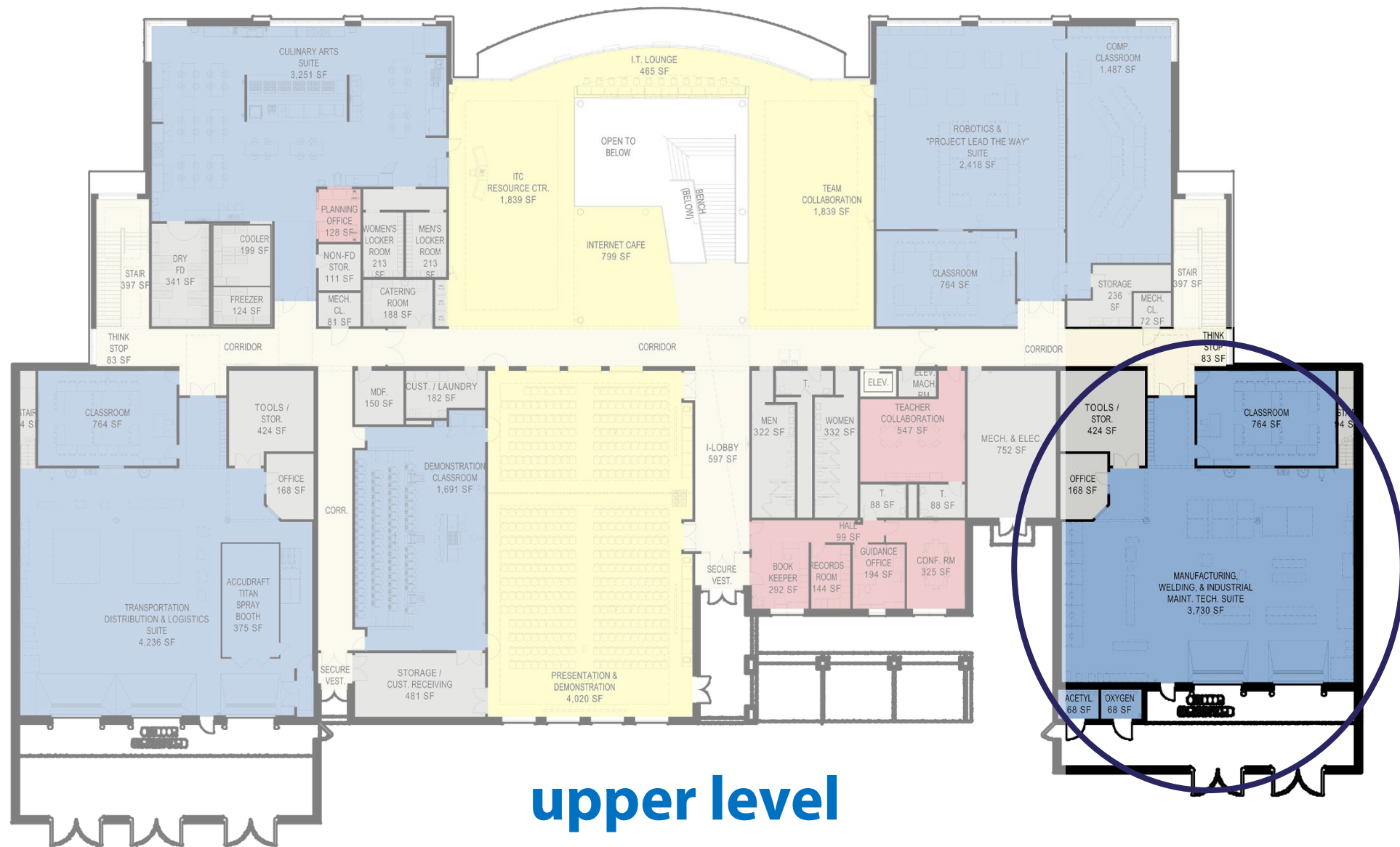
welding

WELDING TECHNOLOGY

EC³

Manufacturing, Business & Industry Day
Summit Polymers

Welding



Welding



Welding



Welding



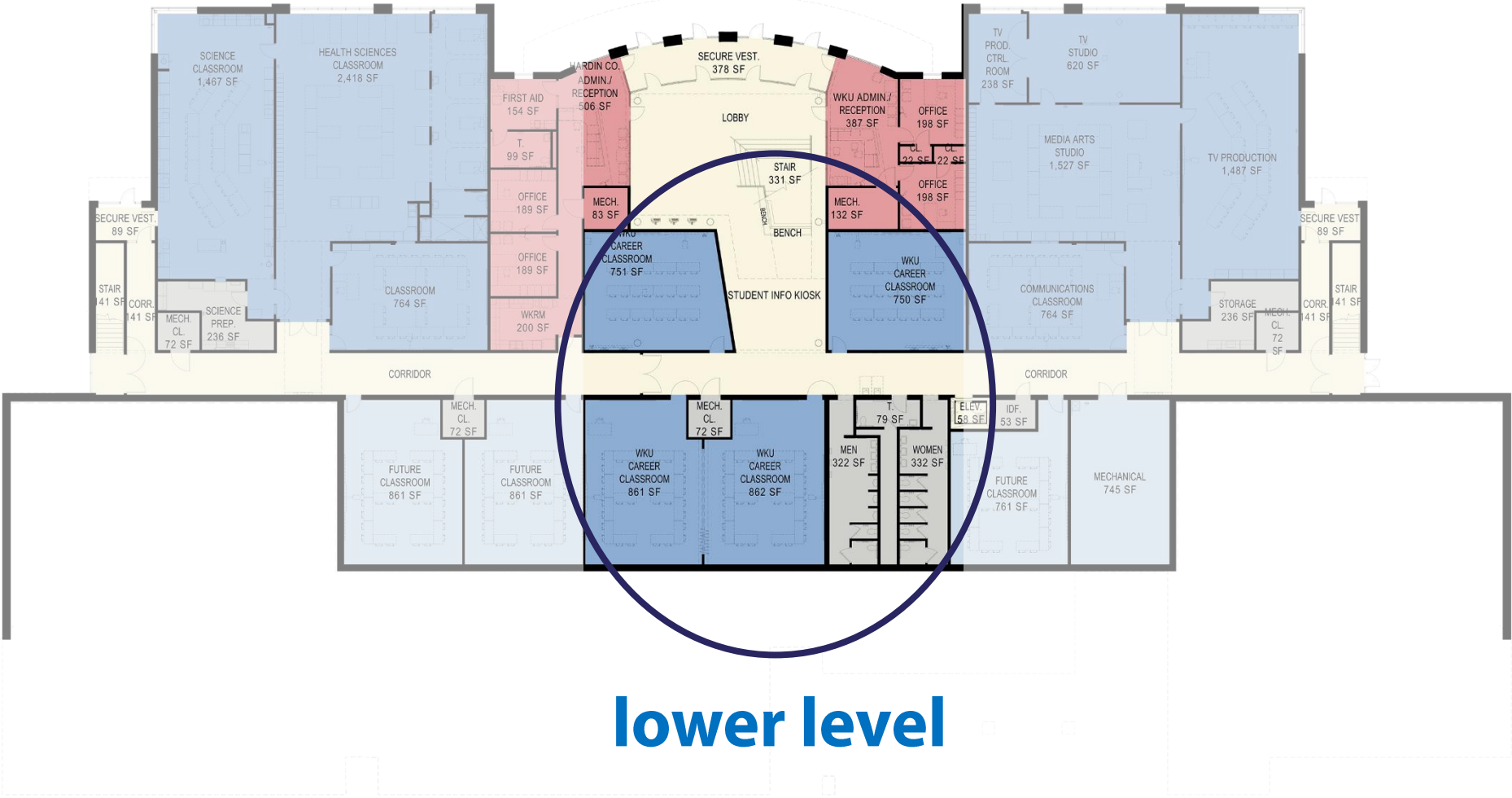
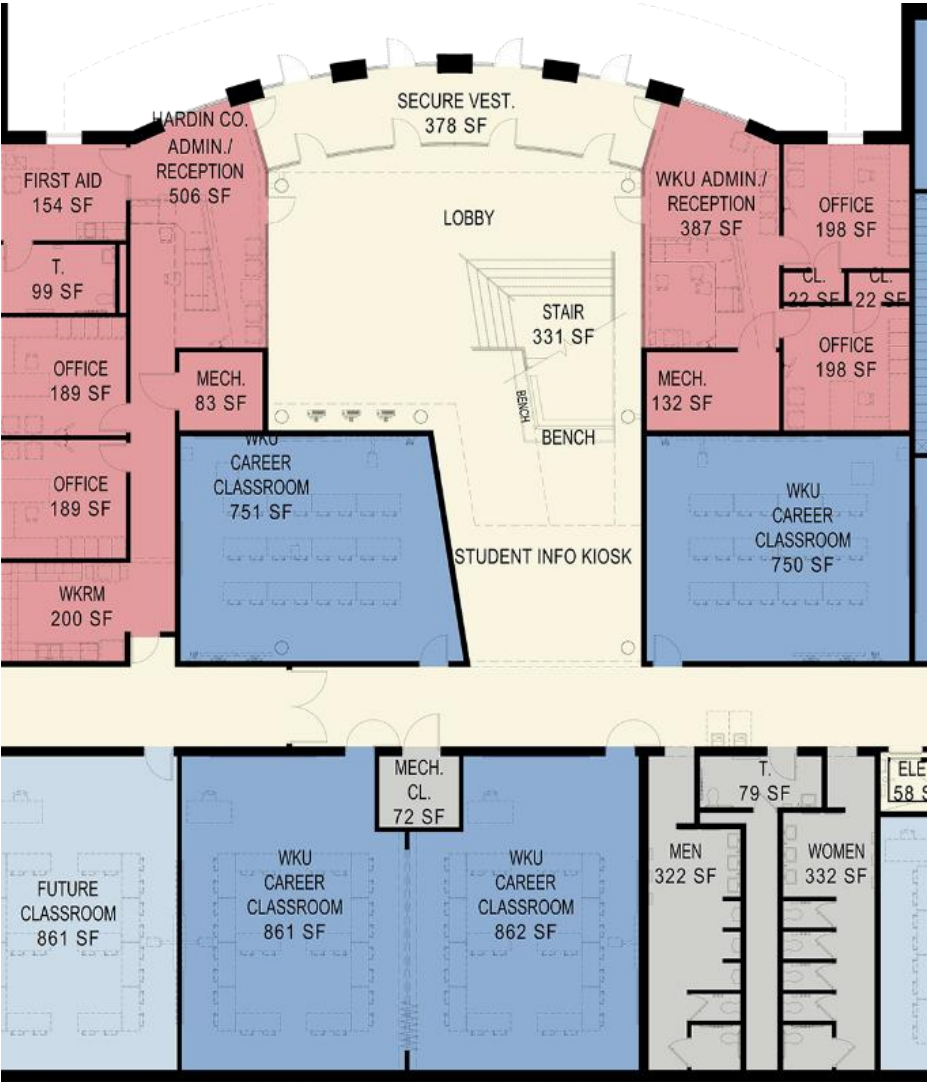


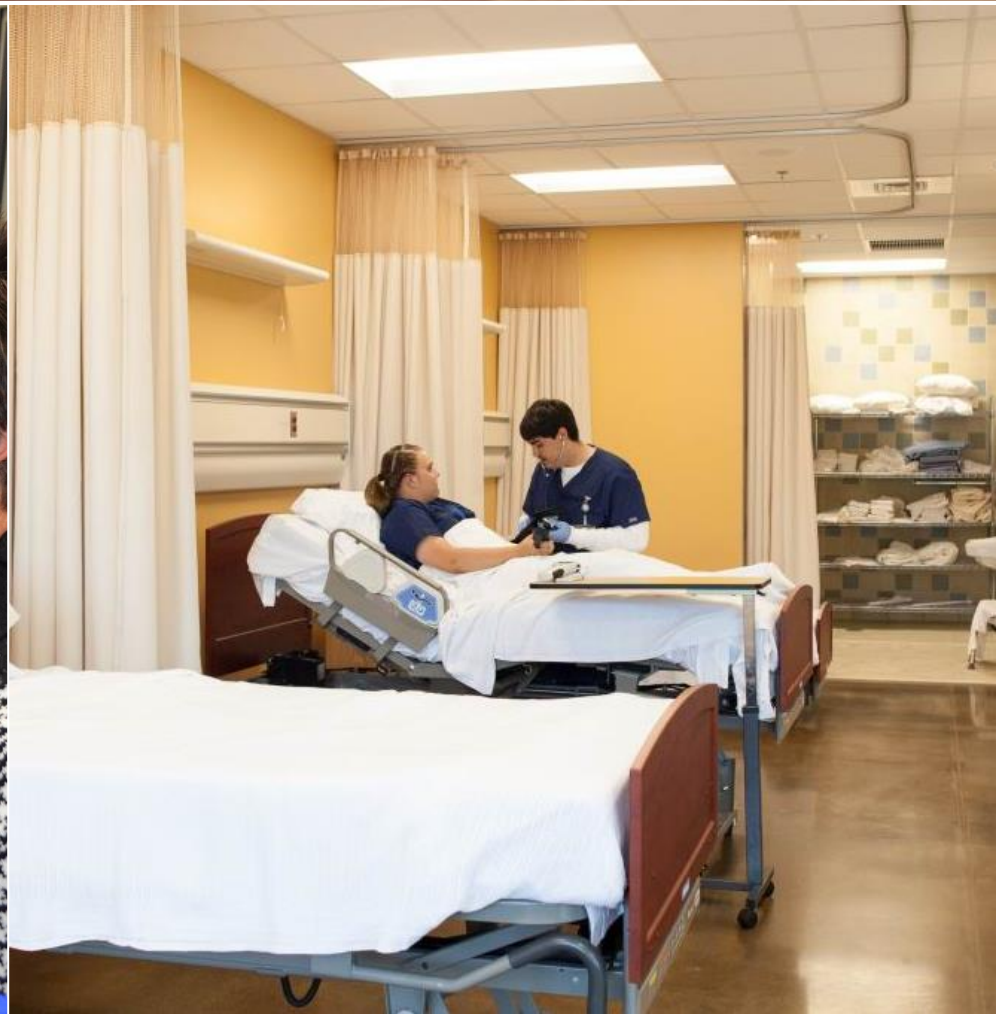
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early college

KU ELIZABETHTOWN
FORT KNOX

Early College

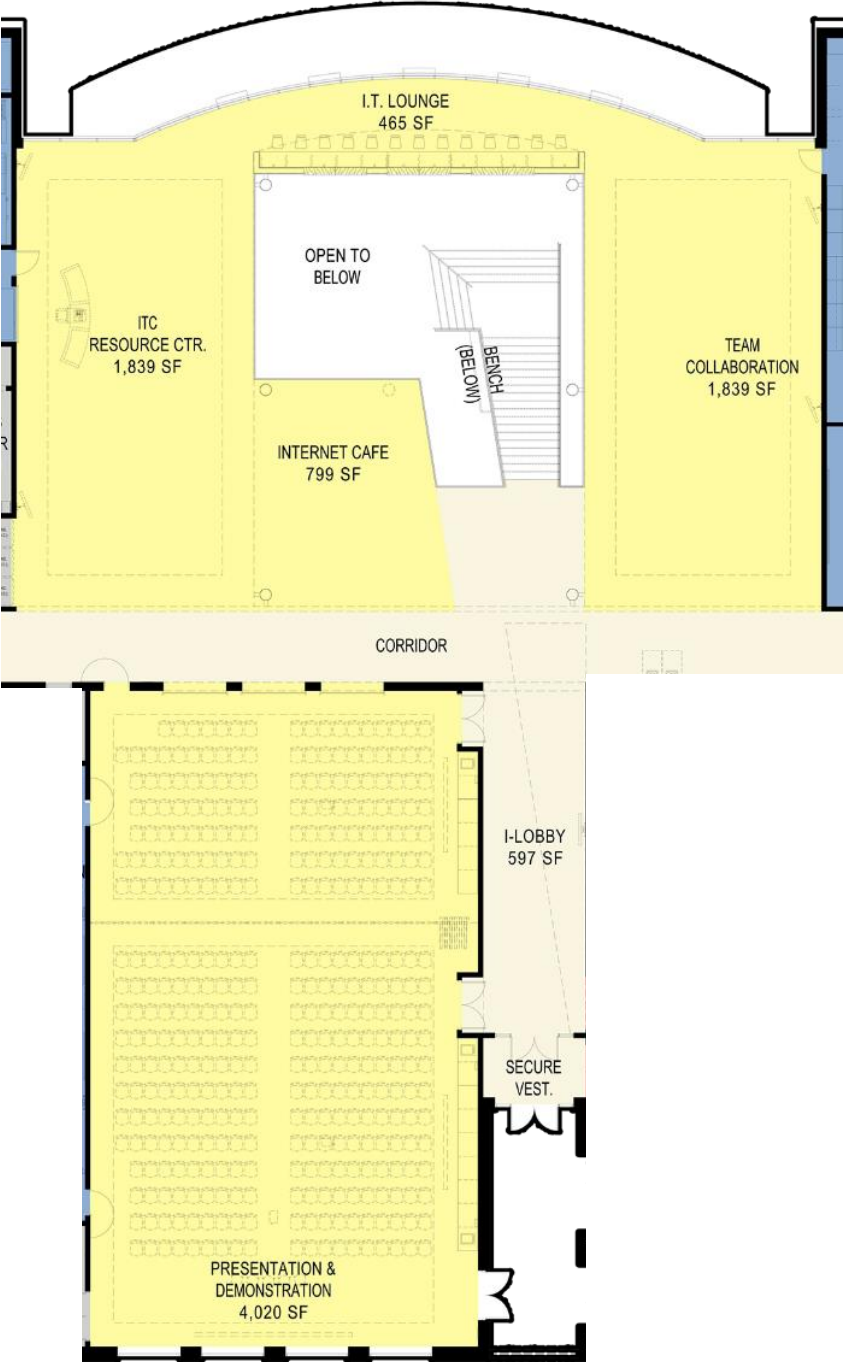
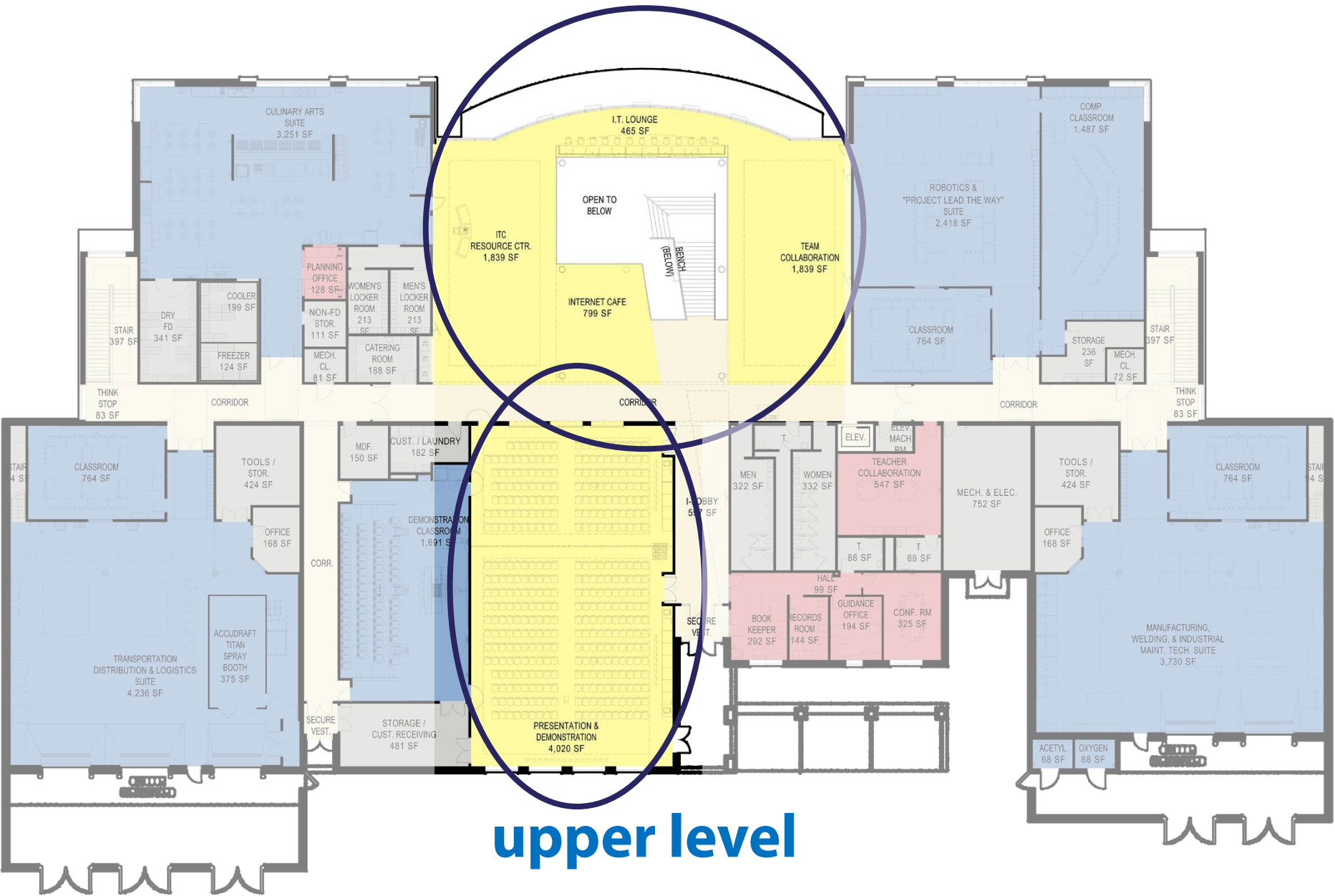




A wide-angle photograph of a modern university atrium. The space features a large, multi-level design with a prominent staircase in the center. The walls are painted in light blue and green, and the ceiling has a grid of recessed lights. In the foreground, there is a lounge area with blue armchairs and orange circular tables. Several students are visible, some sitting and some walking. The text "beyond the KDE program" is overlaid in large, green, bold letters.

beyond the KDE program

Beyond The KDE Program



Collaboration Zone



Collaboration Zone



Presentation Hall – Johnston Hall



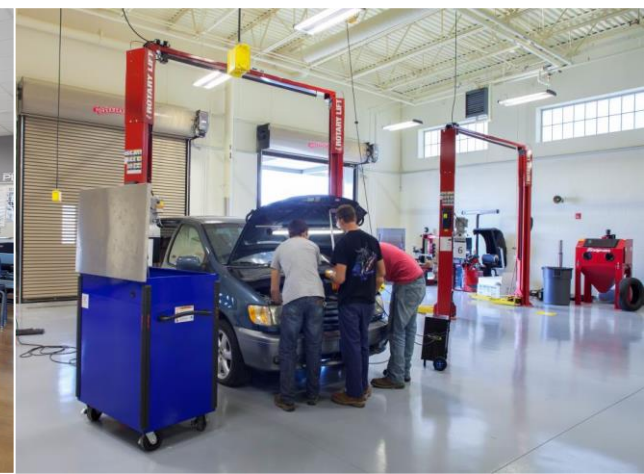
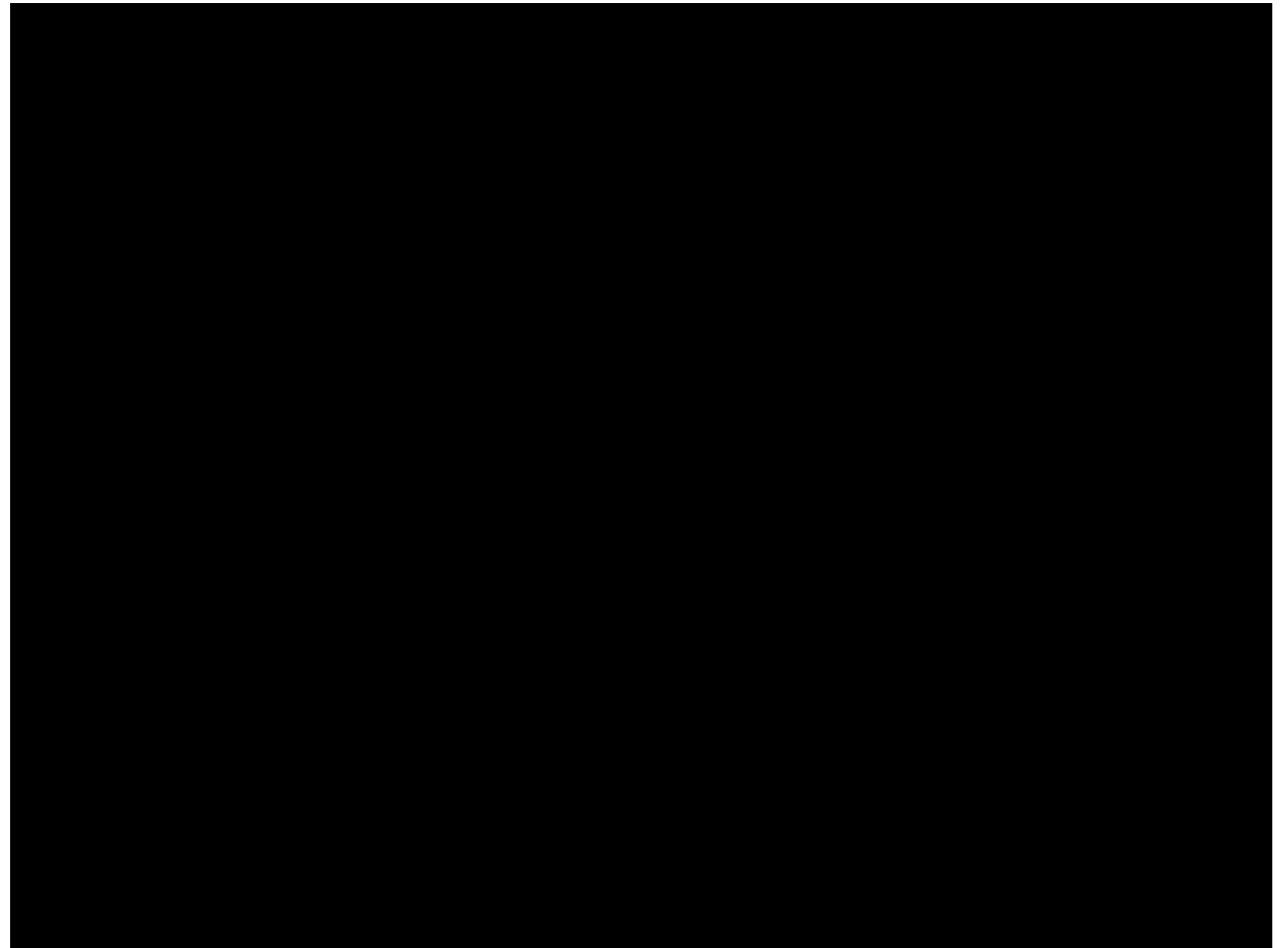
Presentation Hall – Johnston Hall



HARDIN COUNTY SCHOOLS

EC³

EARLY COLLEGE & CAREER CENTER



will
YOU
be ready ?



Thank You

Kenny Stanfield, AIA, LEED AP
Sherman Carter Barnhart Architects

SHERMAN
CARTER
BARNHART
ARCHITECTS